Biological Effects of Ultrasound

Dr. Aastha Mishra

Biological Effect

Ultrasound can have some useful effects in all three stages of repair

1. **Inflammatory**:

Ultrasound probably increases the fragility of lysosome membrane, and thus enhances the release of their contained enzymes. These enzymes will help to clear the area of debris and allow the next stage to occur.

2. **Proliferative**:

Fibroblasts and myofibroblasts may have Ca++ ions driven into them by the ultrasound.

This increases their mobility and encourages their movement toward the area of repair.

The fibroblasts are stimulated to produce the collagen fibers to form scar and myofibroblasts contract to pull the edges together.

3. **Remodeling**:

Ultrasound has been shown to increase the tensile strength of the scar by affecting the direction, strength and elasticity of fibers which make up the scar easier.